

Etat Membre de l'OIML
Member State of OIML
FRANCE

CERTIFICAT OIML DE CONFORMITE
OIML CERTIFICATE OF CONFORMITY

N° R117/2007-FR2-17.01

Autorité de délivrance <i>Issuing authority</i>	: Laboratoire National de Métrologie et d'Essais Personne responsable (Person responsible) : Thomas LOMMATZSCH
Demandeur <i>Applicant</i>	: ALMA - 4A Boulevard de la Gare - Porte 1 FRANCE 94470 BOISSY SAINT LEGER
Fabricant <i>Manufacturer</i>	: ALMA 4A Boulevard de la Gare - Porte 1 FRA 94470 BOISSY SAINT LEGER
Identification du type certifié <i>Identification of the certified pattern</i>	: Mesureurs tubines ALMA type ADRIANE DN 50-30 GPL, DN 50-40, DN 50-50, DN 80-80, DN 100-80, DN 100-150 et DN 150-600 <i>Turbines meters ALMA type ADRIANE DN 50-30 GPL, DN 50-40, DN 50-50, DN 80-80, DN 100-80, DN 100-150 and DN 150-600.</i>
Caractéristiques <i>Characteristics</i>	: voir annexe <i>see annex</i>

Ce certificat atteste la conformité du modèle mentionné ci-dessus (représenté par les échantillons identifiés dans les rapports d'essais associés) aux exigences de la Recommandation suivante de l'Organisation Internationale de Métrologie Légale – OIML) :

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test reports with the requirements of the following Recommendation of the International Organization of Legal Metrology – OIML) :

R117/2007

Ce certificat s'applique uniquement aux caractéristiques métrologiques et techniques du modèle d'instrument concerné, telles que couvertes par la Recommandation Internationale applicable. Ce certificat ne constitue en rien une approbation internationale à caractère légal. Note importante : à part la mention du numéro de référence du certificat avec le nom de l'Etat Membre de l'OIML dans lequel le certificat a été délivré, une reproduction partielle du certificat ou des rapports d'essais associés n'est pas autorisée, mais ils peuvent être reproduits dans leur totalité.

This certificate relates only to the metrological and technical characteristics of the pattern for the concerned instrument, as covered by the relevant OIML International Recommendation. This certificate does not bestow any form of legal international approval. Important note : Apart from the mention of the certificate's reference number and the name of the OIML Member State in which the certificate was issued, partial quotation of the certificate or the associated test report is not permitted, though they may be reproduced in full.

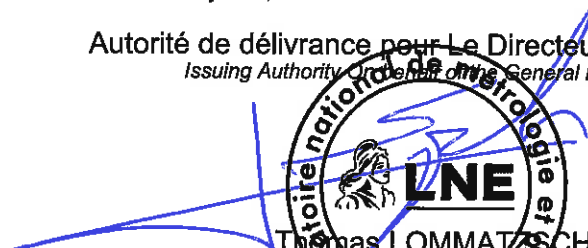
Les principales caractéristiques figurent dans l'annexe ci-jointe qui fait partie intégrante du certificat OIML de conformité et comprend 1 page(s).

The principal characteristics are set out in the appendix hereto, which forms part of the OIML certificate of conformity and consists of 1 page(s).

Etabli le 10 juillet 2017

Issued on July 10th, 2017

Autorité de délivrance pour Le Directeur Général
Issuing Authority for the General Director



Thomas LOMMATZSCH
Responsable du Pôle Certification
Measuring Instruments Division Manager

Référence LNE-33084 rév. n° 0

Laboratoire national de métrologie et d'essais

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History

Date	Revision	Modification
2017.07.10	0	Creation

Identification of the certified pattern:

Turbine meters ALMA types ADRIANE DN50-30 GPL, DN50-40, DN50-50, DN80-80, DN100-80, DN 100-150 and DN 150-600, designed to be fitted to measuring systems for liquids other than water.

These turbine meters fulfill the requirements of OIML R117-1 (2007) and R117-2 / R117-3 (2014).

The conformity was established by the results of tests and examinations provided in the associated test reports "ST CHAMAS n° 1", "FLEURUS BELGIQUE n° 2", TEC\902, 0909, TEC\905, TEC\907, SE/12/0324, SE/12/0325, SE/13/0246 to 0250, 222644, 223304, P124902-DE/1, P167462-DE/1 and P167462-DE/2, and evaluation reports G030252-D13, J021322-D1, L100964-D1, N040143, N110659-D1, P105191, P124902, P140202, P162001 and P164942.

Description

Each ALMA turbine meter ADRIANE comprises:

- a body : each ADRIANE turbine meter has an identical body shape and internal shape,
- a flow straightener mounted upstream of the propeller, either an internal honeycomb or a separate tube flow straightener ALMA mounted upstream the meter for concerned models,
- an internal diametric hub supporting the fixed axis, around which the propeller revolves.

The ALMA turbine meters ADRIANE can be associated to a two-way pulse emitter system such as:

- ALMA pulse emitter 2H00 or 2HP0,
- two separate induction coils, fixed to a calculator connected to the meter,
- two separate induction coils, connected to a calculator deported to the meter.

Metrological characteristics

Model	DN 50-30 GPL	DN 50-40	DN 50-50	DN 80-80	DN 100-80	DN 100-150	DN 150-600
Min flowrate (m ³ /h)	6	4		8		15	60
Max flowrate (m ³ /h)	30	40	50	80		150	600
Minimum measured quantity for measuring systems	50 L (2H00 emitter) 10 L (2HP0 emitter)			100 L (2H00 emitter) 20 L (2HP0 emitter)		1000 L (2H00 emitter) 200 L (2HP0 emitter)	
Absolute Min pressure	SVP* + 1 bar	0.3 bar		Atmospheric pressure			
Absolute Max pressure	30 bar	20 bar		30 bar		100 bar	
Measured liquid temperature range	-10 °C ⁽¹⁾ to + 50 °C						
Measured liquids	LPG		Oil and gasoil	Hydrocarbons except LPG, biofuels, chemical liquids ⁽²⁾ , alcohols			
Maximal kinematic viscosity at metering conditions	LPG		Oil and gasoil	10 mm ² /s	13 mm ² /s		
Multi-products	NO			YES			
Accuracy class	1.0	0.5			0.5 or 0.3		0.3
Environmental classes	M2 / E3						
Ambient temperature range	- 25°C to + 55°C						

* SVP: saturated vapour pressure of metered liquid

⁽¹⁾ The minimum temperature of liquids measured by ALMA ADRIANE turbine meters is - 10 °C, except :

- 2 °C for standard fuel oil and diesel oil,
- 0 °C for vegetable oil methyl esters (DN80-80, DN100-80 et DN100-150),
- + 8 °C for vegetable oil methyl esters (DN50-50).

⁽²⁾ Aqueous urea solution with a concentration of 32.5% is a chemical liquid.